

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 34-38 and 45-50 are pending in this application. Claims 34 and 45 are independent. The remaining claims depend, directly or indirectly, from claims 34 and 45.

Interview Summary

Applicant thanks the Examiner for the courtesies extended in the telephonic interview on February 8, 2007, during which the claim rejections were discussed. At the conclusion of the interview, Applicant agreed to file a response to the Action to clarify the proposed amendments to the claims. The amendments submitted herewith are in accordance with that discussion.

Claim Amendments

Independent claims 34 and 45 have been amended in this reply to clarify the present invention recited. In particular, claims 34 and 45 were amended to clarify incrementally rotating the bit, and repeating the calculating of the crater parameters through a selected incremental angle of rotation. No new matter has been added by way of this amendment, as support may be found in, for example, paragraph 33 of the specification.

Additionally, claims 34 and 45 were amended to clarify that the volume of formation cut by each of the roller cones is graphically displayed. No new matter has been

added by way of this amendment, as support may be found in, for example, paragraph 40 of the specification.

Rejections under 35 U.S.C. § 101

Claims 34-38 and 45-50 stand rejected under 35 U.S.C. § 101 for failing to claim statutory subject matter. Independent claims 34 and 45 have been amended in this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

Independent claims 34 and 45, as amended, recite, in-part, incrementally rotating the bit, and repeating the calculating of the crater parameters through a selected incremental angle of rotation, and graphically displaying the formation with a volume cut by each of the roller cones.

Applicant notes that a claimed invention as a whole must accomplish a practical application. That is, it must produce a “useful, concrete, and tangible result.” *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. Independent claims 34 and 45 have been amended to clarify the present invention recited. In particular, claims 34 and 45, as amended, include a practical application with a useful, concrete, and tangible result, as both independent claims recite graphically displaying the formation with a volume cut by each of the roller cones. Thus, the claimed invention is statutory. Dependent claims 35-38 and 46-50 are statutory for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection under 35 U.S.C. § 112

Claims 34-38 and 45-50 stand rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement. Claims 34 and 45 have been amended in

this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.


In the Action, the Examiner notes that the limitation "a selected number of incremental rotations" is not clearly and concisely defined in the specification. The Examiner further notes that the specification references selecting bit design parameters, drilling parameters, and earth formation parameters, and selecting an incremental angle. (See paragraph 33 of the specification). As noted above, independent claims 34 and 45 have been amended in this reply. As amended, independent claims 34 and 45 recite, in-part, incrementally rotating the bit, and repeating the calculating of the crater parameters through a selected incremental angle of rotation. Thus, independent claims 34 and 45 satisfy the enablement requirement. Dependent claims satisfy the enablement requirement for at least the same reasons. In view of the above, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number [05516/056003]).

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Respectfully submitted,

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